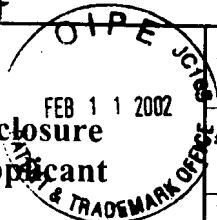


Form 1449 (Modified)	Atty Docket No.: IMM1P013C	Application No.: 09/748,051
<b>Information Disclosure Statement By Applicant</b>  <i>(Use Several Sheets if Necessary)</i>	Applicant: Rosenberg et al.	
	Filing Date: 12/22/00	Group: 2672



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**U.S. Patent Documents**

Examiner Initial		Patent No.	Date	Patentee	Class	Sub- Class	Filing Date
JB	*	3,490,059	01/13/70	Paulsen et al.	73	133	06/06/66
JB	*	3,795,150	3/5/74	Eckhardt	74	5.4	12/13/72
JB		3,919,691	11/11/75	Noll	340	172.5	5/26/71
JB	*	4,148,014	04/03/79	Burson	340	709	04/06/77
JB	*	4,216,467	08/05/80	Colston	340	365L	12/22/77
JB	*	4,398,889	08/16/83	Lam et al.	434	45	06/08/81
JB		4,414,984	11/15/83	Zarudiansky	128	774	12/14/78
JB	*	4,436,188	03/13/84	Jones	188	378	11/18/81
JB	*	4,448,083	05/15/84	Hayashi	73	862.04	04/05/82
JB	*	4,477,043	10/16/84	Repperger	244	223	12/15/82
JB		4,489,304	12/18/84	Hayes	338	128	7/22/83
JB		4,538,035	8/27/85	Pool	200	6	10/13/83
JB	*	4,550,617	11/05/85	Fraignier et al.	73	862.04	05/04/84
JB		4,603,284	7/29/86	Perzley	318	568	6/5/84
JB		4,604,016	8/5/86	Joyce	414	7	8/3/83
JB	*	4,632,341	12/30/86	Repperger et al.	244	230	02/06/85
JB	*	4,689,449	8/25/87	Rosen	200	6	10/3/86
JB	*	4,704,909	11/10/87	Grahn et al.	73	862.04	07/22/85
JB	*	4,712,101	12/8/87	Culver	340	710	12/04/84
JB		4,712,971	12/15/87	Fyler	414	744.5	2/13/85
JB	*	4,775,289	10/4/88	Kazerooni	414	735	9/25/87
JB	*	4,800,721	01/31/89	Cemenska et al.	60	393	02/13/87
JB	*	4,803,413	02/07/89	Kendig et al.	318	648	07/15/86
JB	*	4,811,608	03/14/89	Hilton	73	862.04	11/06/86
JB		4,861,269	8/29/89	Meenen, Jr.	434	45	3/30/88
JB	*	4,874,998	10/17/89	Hollis Jr.	318	568.21	6/21/88
JB		4,878,374	11/7/89	Nelson	72	446	5/20/88
JB	*	4,879,556	11/07/89	Duimel	341	20	10/26/87
JB	*	4,896,554	1/30/90	Culver	74	471	4/24/89
JB		4,949,119	8/14/90	Moncrief et al.	364	578	1/12/89

Examiner: <i>JB</i>	Date Considered: <i>3/1/02</i>
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Form 1449 (Modified)

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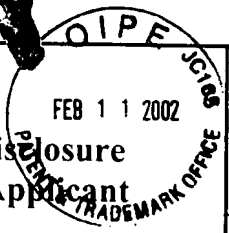
Atty Docket No.: IMM1P013C

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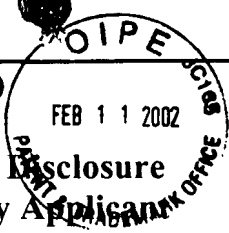
Examiner Initial	Patent No.	Date	Patentee	Class	Sub-Class	Filing Date
JB	4,962,448	10/9/90	DeMaio et al.	364	146	9/30/88
JB	* 5,007,300	04/16/91	Siva	74	471XY	01/22/90
JB	* 5,044,956	9/3/91	Behensky et al.	434	45	1/12/89
JB	* 5,103,404	04/07/92	McIntosh	318	568.22	12/20/89
JB	* 5,107,080	4/21/92	Rosen	200	6	12/1/89
JB	5,107,719	4/28/92	Kota	74	479	8/28/90
JB	* 5,116,051	05/26/92	Moncrief et al.	273	448B	06/08/90
JB	* 5,142,931	09/01/92	Menahem	74	471XY	02/14/91
JB	* 5,143,505	09/01/92	Burdea et al.	414	5	02/26/91
JB	5,146,566	9/8/92	Hollis, Jr. et al.	395	275	5/29/91
JB	* 5,182,557	01/26/93	Lang	341	20	11/13/90
JB	* 5,184,319	02/02/93	Kramer	364	806	02/02/90
JB	* 5,185,561	02/09/93	Good et al.	318	432	07/23/91
JB	* 5,186,629	02/16/93	Rohen	434	114	08/22/91
JB	5,193,963	3/16/93	McAfee et al.	414	5	10/31/90
JB	* 5,223,776	06/29/93	Radke et al.	318	568.1	12/31/90
JB	* 5,228,356	07/20/93	Chuang	74	471XY	11/25/91
JB	* 5,264,768	11/23/93	Gregory et al.	318	561	10/6/92
JB	* 5,275,565	1/4/94	Moncrief	434	29	2/23/93
JB	5,277,281	1/11/94	Carlson et al.	188	267	6/18/92
JB	* 5,296,846	03/22/94	Ledley	345	161	10/05/92
JB	5,296,871	3/22/94	Paley	345	163	7/27/92
JB	5,351,412	10/4/94	Furuhata et al.	33	568	5/29/92
JB	* 5,354,162	10/11/94	Burdea et al.	414	5	08/31/92
JB	5,355,148	10/11/94	Anderson	345	166	1/14/93
JB	* 5,379,663	01/10/95	Hara	74	471XY	11/22/93
JB	* 5,396,266	3/7/95	Brimhall	345	161	6/8/93
JB	* 5,396,267	3/7/95	Bouton	345	168	1/7/93
JB	* 5,405,152	4/11/95	Katanics et al.	273	438	6/8/93
JB	* 5,414,337	05/09/95	Schuler	318	561	06/11/93

Examiner: *PRIMARY EXAMINER*

Date Considered: 3/1/02

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**U.S. Patent Documents**

Examiner Initial		Patent No.	Date	Patentee	Class	Sub-Class	Filing Date
JB	*	5,429,140	07/04/95	Burdea et al.	128	774	06/04/93
JB	*	5,436,640	07/25/95	Reeves	345	161	11/30/94
JB	*	5,452,615	09/26/95	Hilton	73	862.043	07/22/93
JB	*	5,513,100	4/30/96	Parker et al.	364	167	6/10/93
JB		5,565,840	10/15/96	Thorner et al.	340	407.1	9/21/94
JB	*	5,576,727	11/19/96	Rosenberg et al.	345	179	06/05/95
JB		5,577,981	11/26/96	Jarvik	482	4	8/4/95
JB	*	5,587,937	12/24/96	Massie et al.	364	578	4/25/95
JB	*	5,589,828	12/31/96	Armstrong	341	20	03/05/92
JB	*	5,589,854	12/31/96	Tsai	345	161	6/22/95
JB	*	5,591,924	01/07/97	Hilton	73	862.043	04/23/93
JB	*	5,629,594	5/13/97	Jacobus et al.	318	568	8/16/95
JB	*	5,642,469	6/24/97	Hannaford et al.	395	99	11/3/94
JB		5,643,087	7/1/97	Marcus et al.	463	38	7/29/94
JB	*	5,666,138	09/09/97	Culver	345	161	11/22/94
JB		5,666,473	9/9/97	Wallace	345	420	10/8/92
JB	*	5,694,153	12/02/97	Aoyagi et al.	345	161	07/31/95
JB		5,709,219	1/20/98	Chen et al.	128	782	8/1/96
JB	*	5,721,566	02/24/98	Rosenberg et al.	345	161	6/9/95
JB	*	5,724,068	03/03/98	Sanchez et al.	345	161	09/07/95
JB	*	5,731,804	03/24/98	Rosenberg	345	156	1/18/95
JB	*	5,734,373	3/31/98	Rosenberg et al.	345	161	12/1/95
JB		5,742,278	4/21/98	Chen et al.	345	156	11/1/95
JB	*	5,754,023	05/19/98	Roston et al.	318	561	10/22/96
JB	*	5,755,577	05/26/98	Gillio	434	262	7/11/96
JB	*	5,767,839	06/16/98	Rosenberg	345	161	3/3/95
JB		5,784,052	7/21/98	Keyson	345	167	3/12/96
JB	*	5,790,108	08/04/98	Salcudean et al.	345	184	10/23/92
JB		5,805,140	9/8/98	Rosenberg et al.	345	161	11/17/95
JB		5,816,105	10/6/98	Adelstein	74	471XY	7/26/96

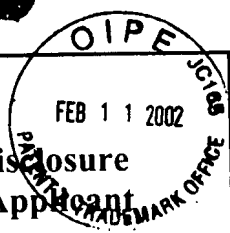
<b>Examiner:</b> JEFFREY C. FRI PRIMARY EXAMINER	<b>Date Considered:</b> 3/1/02
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**Other Documents**

Examiner Initial	Author, Title, Date, Place (e.g. Journal) of Publication
JB	* Snow, E., et al., "Compact Force Reflecting Hand Controller," NASA Tech Brief Vol. 15, No. 4, Item 153, April 1991, pp. i, 1-3, 1a-15a.
JB	* Howe, R. et al., "Task Performance with a Dextrous Teleoperated Hand System," Proceedings of SPIE, Vol. 1833, Nov. 1992.
JB	* Buttolo, et al., "Hard Disk Actuators for Mini Teleoperation," Proc. SPIE, Telemanipulator and Telepresence Technologies Symp., Oct. 1994, pp. 1-8.
JB	* Kilpatrick, P., "The Use of a Kinesthetic Supplement in an Interactive Graphics System," Univ. of N. Carolina, 1976, pp. 1-175.
JB	* Buttolo et al., "Pen Based Force Display for Precision Manipulation in Virtual Environments", IEEE March 1995, pp. 217-224.
JB	* Ellis, R.E. et al., "Design and Evaluation of a High-Performance Prototype Planar Haptic Interface," ASME December 3, 1993, DSC-Vol. 49, pp. 55-64.
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JB	* Rosenberg, Louis B., "The Use of Virtual Fixtures to Enhance Operator Performance in Time Delayed Teleoperation, Armstrong Laboratory, March 1993, pp. 1-45.
JB	* Rosenberg, Louis B., "Perceptual Design of a Virtual Rigid Surface Contact," Center for Design Research Stanford University, Air Force Material Command, April 1993, pp. 1-41.
JB	* Burdea, Grigore et al., "Dextrous Telerobotics with Force Feedback-An Overview," Robotica 1991, Vol. 9.
JB	* Adelstein, Bernard D. et al., "Design and Implementation of a Force Reflecting Manipulandum for Manual Control Research," Dept. of Mech. Eng., MIT, 1992, pp. 1-24.
JB	* Hannaford, B. et al., "Performance Evaluation of a Six-Axis Generalized Force-Reflecting Teleoperator," IEEE Transactions on Systems, Man, and Cybernetics, 1991.
JB	* Minsky, et al., "Feeling and Seeing: Issues in Force Display", Department of Computer Science, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599, 1990 ACM.
JB	* Batter, et al., "Grobe-1: A Computer Display to the Sense of Feel", University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA
JB	* Gotow, J.K., et al., "Perception of Mechanical Properties at the Man-Machine Interface," IEEE 1987, pp. 688-689.
JB	* Atkinson, William D. et al, "Computing with Feeling," Comput. & Graphics, Vol. 2, 1977, pp. 97-103.
JB	* Tavkhelidze, et al., "Kinematic Analysis of Five-Link Spherical Mechanisms," Mechanism and Machine Theory, Vol., 9, 1974, pp. 181-190.
JB	* Schmolt, Brian et al., "Application Areas for a Force-Feedback Joystick," ASME 1993, DSC-Vol. 49, pp. 47-54.

<b>Examiner:</b> [Signature]	<b>Date Considered:</b> 3/1/02
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